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## A Cross Sectional Survey to Assess the Side Effects Associated with Covid-19 Vaccination Among Nursing Students

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## Abstract

**Introduction** - The COVID-19 pandemic in India is a part of the worldwide pandemic of coronavirus disease 2019 (COVID-19) caused by Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2).

Statement- "A cross sectional survey to assess the side effects associated with covid-19 vaccination among nursing students."

**Objective** -To assess the side effects of covid-19 vaccination among nursing students.

**Material and methods-** Investigator has used cross sectional descriptive study design to assess the side effects of covid-19 vaccination among nursing students. Targeted population for this study was nursing students who have undergone Covid-19 vaccination with one or two dosages of vaccine. The total sample size was 166. Sampling technique used for the present study was non-probability convenient sampling technique.

## Results

Findings of the study revealed that the 57.2% of the participants have experienced headache, 69.3% of the participants have experienced fever, 36.1 % of the participants have experienced dizziness, 40.4 % of the participants have experienced heaviness in the eyes, 75.9 participants have experienced pain at injection site, 52.4% have experienced weakness. Findings also revealed that 15.1% have experienced irritability, 51.8% have experienced muscle pain, 21.1% have experienced joint pain, and very few were having rashes throughout body or swelling on face.

**Conclusion-** Mild to moderate side effects may be experienced by the vaccinated person but these symptoms may disappear in few hours to few days.

## Keywords: COVID-19, Side effects, and Nursing students INTRODUCTION

The COVID-19 pandemic in India is a part of the worldwide pandemic of coronavirus disease 2019 (COVID-19) caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). The first cases of COVID-19 in India were reported in the towns of Thrissur, Alappuzha and Kasargod, all in the state of Kerala, among three Indian medical students who had returned from Wuhan.

Vaccination against COVID 19 disease is intended to provide acquired immunity against severe acute respiratory syndrome coronavirus 2 (SARS CoV 2), the virus that causes coronavirus disease 2019 (COVID 19). Vaccines are designed to give us immunity without the dangers of getting the disease.

Central Drugs Standard Control Organization (CDSCO) in India have granted authorization of emergency use of two vaccines, Covishield and

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Covaxin. Covishield is AstraZeneca's vaccine and manufactured by Serum Institute of India, Pune, Maharashtra. Composition of Covishield vaccine includes inactivated adenovirus with segments of Coronavirus, Aluminium Hydroxide Gel, L-Histidine, L-Histidine Hydrochloride Monohydrate, Magnesium Chloride Hexahydrate, Polysorbate 80, Ethanol, Sucrose, Sodium Chloride, and Disodium Edetate Dihydrate (EDTA).

Covaxin vaccine is manufactured by Bharat Biotech Limited. Composition of Covaxin vaccine includes inactivated Coronavirus, Aluminum Hydroxide Gel, TLR 7/8 Agonist, 2-Phenoxyethanol and Phosphate Buffered Saline [NKA1].

Govt of India has also granted authorization of Emergency use for Sputnik - V in the month of April, 2021, Moderna vaccine in the month of June, 2021 and Johnson & Johnson in the month of August, 2021.

As per the data from Ministry of Health and Family Welfare (MOHFW) dated 22.08.2021 at 7.00 AM, population vaccinated with both the dosage are 13,07,33,727 and population vaccinated with one dose is 45,07,55,650.

Person may experience some mild-to-moderate side effects when receiving any kind of vaccinations. This is because our immune system is instructing our body to react in certain ways: it increases blood flow so more immune cells can circulate, and it raises our body temperature in order to kill the virus.

## STATEMENT

"A cross sectional survey to assess the side effects associated with covid-19 vaccination among nursing students."

#### **OBJECTIVE**

To assess the side effects associated with covid-19 vaccination among nursing students.

## MATERIAL AND METHODS

Investigator has used cross sectional descriptive study design to assess the side effects of covid-19 vaccination among nursing students. Targeted population for this study was nursing students who have undergone Covid-19 vaccination with one or two dosages of vaccine. The total sample size was 166. Sampling technique used for the present study was non-probability convenient sampling technique.

Volume 4, Issue 5; September-October 2021; Page No 438-442 © 2021 IJMSCR. All Rights Reserved Participants were given assurance about confidentiality of their information and a digital informed consent was taken from the participants. Participants were asked to share their experience of side effects associated with Covid-19 vaccination within 72 hours of vaccination.

## RESULTS

Data analysis was done using descriptive methods. Frequency and percentage were used to analyse the data descriptively.

#### Table 1

S.	Item	Freq.	%
No			
1.	Age		
	• 18-20 Years	13	7.8
	• 21-23 Years	62	37.3
	• 24-26 Years	57	34.3
	• 27 & above	34	20.5
2.	Gender		
	• Male	64	38.6
	• Female	102	61.4
3.	Class		
	• First Year	33	19.9
	• Second Year	59	35.5
	• Third Year	11	6.6
	• Final Year	63	38
4.	Course in which enrolled		
	• GNM	6	3.6
	• B.Sc. Nursing	107	64.5
	• Post Basic B.Sc.	50	30.1
	Nursing	3	1.8
	• M.Sc. Nursing	-	0
	• Any other if pls specify		
5.	Which Vaccine you have		
	laken for Covid-19	156	94
	• Covishield	10	06

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	Covaxin	_	00
	• Sputnic-V	-	00
	• Moderna	-	00
	• Johnson & Johnson	-	00
	• Any Other		
6.	How Many dosages have been		
	taken?	37	22.3
	• 01	129	77.7
	• 02		
•			

# Table 1: Frequency and percentage distribution ofsocio-demographicdataofCovid-19vaccinatednursing students

The above table no.1 shows that the majority (37.3%)participants were in the age group of 21-23 years of age, and few (34%) were in the age group of 24-26 years of age. Majority (61.4%) of the participants were female and rest (38.6%) were male. Majority (38%) of the participants were in the final year and rest were in first/second/third year. Majority (64.5%) of the participants were studying in B.Sc. Nursing course and few (30.1%) were pursuing Post Basic B.Sc. Nursing Course. Majority (94%) participants have taken Covishield Vaccine for Covid-19 vaccination and few (6%) have taken Covaxin vaccine for covid-19 vaccination. Majority (77.7%) participants have taken two dosage of Vaccine for Covid-19 vaccination and few (22.3%) have taken one dose of vaccine for covid-19 vaccination.

## Table 2

S.	Item	Freq.	%
No			
1.	Have you experienced headache after Covid-19 vaccination?		
	• Yes	95	57.2
	• No	71	42.8
2.	Have you experienced Fever after		
	Covid-19 vaccination?	115	69.3
	• Yes	51	30.7
	• No		

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3.	Have you experienced abdominal pain after Covid-19 vaccination?		
	• Yes	8	4.8
	• No	158	95.2
4.	Have you experienced nausea after Covid-19 vaccination?	21	10.7
	• Yes	31 125	10.7
	• No	155	01.5
5.	Have you experienced vomiting after Covid-19 vaccination?		
	• Yes	12	7.2
	• No	154	92.8
6.	Have you experienced dizziness after Covid-19 vaccination?		
	• Yes	60	36.1
	• No	106	63.9
7.	Have you experienced heaviness in eyes after Covid-19 vaccination?		
	• Yes	67	40.4
	• No	99	59.6
8.	Have you experienced pain at injection site after Covid-19 vaccination?		
	• Yes	126	75.9
	• No	40	24.1
9.	Have you experienced Chest pain after Covid-19 vaccination?		
	• Yes	8	4.8
	• No	158	95.2
10.	Have you experienced allergic reaction to drug after Covid-19		
		3	1.8
	• No	163	98.2
11.	Have you experienced weakness after Covid-19 vaccination?		
	• Yes	87	52.4
	• No		

		79	47.6
12.	Have you experienced Breathing difficulty after Covid-19 vaccination?		
	• Yes	6	3.6
	• No	160	96.4
13.	Have you experienced irritability after Covid-19 vaccination?		
	• Yes	25	15.1
	• No	141	84.9
14.	Have you experienced rashes throughout body after Covid-19 vaccination?		
	• Yes	01	0.6
	• No	165	99.4
15.	Have you experienced swelling on face after Covid-19 vaccination?		
	• Yes	4	2.4
	• No	162	97.6
16.	Have you experienced Muscle pain after Covid-19 vaccination?		
	• Yes	86	51.8
	• No	80	48.2
17.	Have you experienced Joint pain after Covid-19 vaccination?		
	• Yes	35	21.1
	• No	131	78.9

## Table 2: Frequency and percentage distribution ofside effects of Covid -19 vaccination among nursingstudents

Table no.2 shows that majority (57.2%) of the participants have experienced headache after covid-19 vaccination. Almost 69.3% of the participants have experienced fever. Less than 20% of the participants have experienced nausea and vomiting after covid-19 vaccination. Approximately 36.1 % of the participants have experienced dizziness. Almost 40.4 % of the participants have experienced heaviness in the eyes. 75.9 participants have experienced pain at injection

Volume 4, Issue 5; September-October 2021; Page No 438-442 © 2021 IJMSCR. All Rights Reserved site after covid-19 vaccination. Very few (4.8%) have experienced chest pain. Majority (52.4%) of the participants have experienced weakness after covid-19 vaccination. Very few (3.6%) have experienced breathing difficulty after covid-19 vaccination.

Few (15.1%) have experienced irritability after covid-19 vaccination. Majority (51.8%) of the participants have experienced muscle pain and few (21.1%) have experienced joint pain after covid-19 vaccination. Very few were having rashes throughout body (0.6%) swelling on face (2.4%). Few of the participants also reported some of the symptoms such as malaise, heavy menstrual bleeding, chills, blurred vision, high blood pressure and fatigue etc.

## DISCUSSION

Riad A, Pokorná A, Attia S, Klugarová J, Koščík M, Klugar M. have conducted a study to assess the prevalence of COVID-19 Vaccine Side Effects among Healthcare Workers in the Czech Republic. Finding of the study revealed that pain at injection site (89.8%), fatigue (62.2%), headache (45.6%), muscle pain (37.1%), and chills (33.9%) were the most commonly reported side effects. All the general side effects were more prevalent among the  $\leq$ 43-year-old group, and their duration was mainly one day (45.1%) or three days (35.8%) following the vaccine.

Riad A, & et. al, have conducted a study to assess the prevalence and Risk Factors of CoronaVac Side Effects: An Independent Cross-Sectional Study among Healthcare Workers in Turkey. Finding of the study revealed that 62.5% of them experienced at least one side effect. Injection site pain (41.5%) was the most common local side effect, while fatigue (23.6%), headache (18.7%), muscle pain (11.2%) and joint pain (5.9%) were the common systemic side effects. Female healthcare workers (67.9%) were significantly more affected by local and systemic side effects than male colleagues (51.4%). Younger age, previous infection, and compromised health status (chronic illnesses and regular medicines uptake) can be associated with an increased risk of CoronaVac side effects.

Das, Darwin has conducted a cross sectional survey on side effects of COVID vaccination. Findings of study shows that experiencing symptoms by health workers after COVID vaccination within 24 hrs are pain at the site of injection lasting for 2-3 days is 67.5%, Headache and Aches of muscle pain having same percentage 62.5. And due to unbearable side effects, none of the health care workers got admitted in hospital.

## **STUDY IMPLICATIONS**

1. Independent epidemiological studies for COVID-19 vaccine side effects should be carried out to increase public awareness and confidence in the vaccines' safety and accelerate its uptake process.

2. A Comparative study to assess the side effects of different vaccines among general population can also be done to have better understanding.

3. Further studies can be conducted to assess the different side effects that are emerged after the first dose, the second dose, and both doses.

## CONCLUSION

Different types of vaccines are available to fight with Covid-19. Theses vaccines are intended to provide acquired immunity against severe acute respiratory syndrome coronavirus 2 (SARS CoV 2), the virus that causes coronavirus disease 2019 (COVID 19). Mild to moderate side effects may be experienced by the vaccinated person but these symptoms may disappear in few hours to few days.

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